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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/382,708	08/24/1999	SON NGUYEN KIM	49322	5584

26474 7590 09/10/2002

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1350 CONNECTICUT AVENUE, N.W.  
WASHINGTON, DC 20036

EXAMINER
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WILLIS, MICHAEL A

ART UNIT	PAPER NUMBER
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1617

DATE MAILED: 09/10/2002 12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/382,708

Applicant(s)

KIM ET AL.

Examiner

Michael A. Willis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's Request for Continued Examination (RCE) and amendment of 5 June 2002 is entered. Claims 1 and 5 are amended. Claims 1 and 5-12 are pending. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Any previous rejections that are not restated in this Office Action are hereby withdrawn. Applicant's arguments are considered as they apply to the new grounds of rejection.

The following new grounds of rejection are made:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 5, 6, 7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chevreux et al (US Pat. 4,717,739). Chevreux discloses compositions for use as an adhesive in laminates (see abstract). The compositions are comprised of monomeric units of a urethane acrylate, acrylic acid, and a monoester of acrylic acid (see col. 2, lines 48-60). The amount of acrylate ranges up to 80% based on the combined weight of the acrylate and acrylic acid (see col. 3, lines 35-40), where the weight of the acrylate and acrylic acid component can be up to 400% by weight compared to the urethane acrylate (see col. 2, lines 55-61). Composition F in Example 2 contains t-butyl acrylate, acrylic acid, and urethane acrylate, where the urethane acrylate is comprised of poly(oxypropylene)glycol, acrylic acid, and toluene diisocyanate (see col. 10, lines 15-67). A wide variety of urethane acrylates are disclosed (see col. 3, line 66 through col. 6, line 16).

Claims 1, 7, 8, 10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Zanotti-Russo (US Pat. 6,140,435). Zanotti-Russo discloses cross-linked acrylic copolymers with high thickening properties. The copolymers are useful in the cosmetic and textile industry (see col. 11, lines 40-52; and Examples C and D). The limitation of "in the form of a hair spray" of claim 12 is not given patentable weight. The copolymers contain from 10-97% carboxylic acid such as acrylic acid, 0-80% carboxylic ester such as butyl acrylate, and 0.5-80% associative monomer such as the acrylic ester of cetylstearylalcohol ethoxylated with 25 moles of ethylene oxide (see col. 2, line 43 through col. 3, line 31).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 5, 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chevreux et al (US Pat. 4,717,739). Chevreux teaches compositions for use as an adhesive in laminates (see abstract). The compositions are comprised of monomeric units of a urethane acrylate, acrylic acid, and a monoester of acrylic acid (see col. 2, lines 48-60). The amount of acrylate ranges up to 80% based on the combined weight of the acrylate and acrylic acid (see col. 3, lines 35-40), where the weight of the acrylate and acrylic acid component can be up to 400% by weight compared to the urethane acrylate (see col. 2, lines 55-61). Composition F in Example 2 contains t-butyl acrylate, acrylic acid, and urethane acrylate, where the urethane acrylate is comprised of poly(oxypropylene)glycol, acrylic acid, and toluene diisocyanate

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(see col. 10, lines 15-67). A wide variety of urethane acrylates are taught (see col. 3, line 66 through col. 6, line 16). Chevreux teaches that the nature of the urethane acrylate component and its concentration are important factors in the properties of the resulting composition (see col. 3, line 56 through col. 4, line 15). The reference lacks disclosed examples of the full scope of the instant claims.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of Chevreux by the use of a variety of monomeric components as taught by Chevreux in order to optimize the properties of the resulting compositions, as taught by Chevreux.

Claims 1, 5-8, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (WO 97/00664).

Chen teaches a copolymer containing acrylic resins crosslinked with acrylated urethane oligomers (see abstract). The copolymer comprises 2-20% carboxylic acid monomer such as acrylic acid (see page 4, lines 15-20; and page 6, lines 9-22). The copolymer further comprises 8-75% acrylate and methacrylate esters such as butyl acrylate and butyl methacrylate (see page 4, lines 28-35; and page 7, lines 19-20 and 33-35). The acrylate esters are used to modify the glass transition temperature, hydrophobicity, and rubbery characteristics of the film (see page 7, lines 5-8). The methacrylate esters are used to modify the gloss, hydrophobicity, and glass transition temperature of the compositions (see page 7, lines 30-33). Additionally the copolymer comprises 0.1-15% of a difunctional acrylated urethane oligomer (see page 4, lines 15-

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16). The urethane oligomer is prepared by reacting a hydroxy (meth)acrylate, a hydroxyl-terminated diol, and a diisocyanate. Suitable diols include polypropylene oxide diol and polyethylene oxide diol (see page 5, line 17 through page 6, line 8). Additional components such as polyesters and diamines are taught, meeting the limitation of claim 6, section n (see page 5, line 17 through page 6, line 8). The intended use of a "hair-treatment composition" or "hair spray" is not given patentable weight. The reference lacks disclosed examples of the full scope of the instant claims.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of Chen by the use of a variety of monomeric components as taught by Chen in order to optimize the properties of the resulting compositions, as taught by Chen.

Claims 1, and 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al (JP 1213221) in view of Yamamoto et al (JP 3206024).

Mori teaches a resin composition for fixing hair colorant. The resin composition is obtained by copolymerizing a (meth)acrylate ester having polyethylene oxide groups, acrylic acid, a C8-C18 aliphatic alcohol ester of acrylic acid, and an additional vinyl-based monomer (see page 3, lines 20-36). Specific examples of each monomer type are given, including butyl (meth)acrylate as the "additional vinyl-based monomer" (see page 4, lines 1-37). Mori teaches that the additional vinyl-based monomer contributes to the appropriate hardness and softness and the like of the resulting film (see page 4, lines 31-32). Hair spray formulations are provided, comprising the copolymer and

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ethanol as solvent, or 86% ethanol and water (see pages 9, especially lines 19-25, and page 10, especially lines 5-10). While the reference teaches the use of butyl (meth)acrylate as a monomer, the reference is silent as to whether the teaching is directed at n- or t-butyl (meth)acrylate.

Yamamoto teaches the use of t-butyl (meth)acrylate as a monomer in resin compositions for hair-dressing (see page 1). Yamamoto teaches that t-butyl (meth)acrylate can be used to contribute to the lipophilicity, softness, and hairwashing properties of the resin. The monomer also contributes to solubility with respect to liquefied petroleum gas for hair sprays (see page 5, lines 8-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions of Mori by the use of t-butyl (meth)acrylate as a species of butyl acrylate in order to benefit from its contribution to lipophilicity, softness, and hairwashing properties as taught by Yamamoto.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Willis whose telephone number is (703) 305-1679. The examiner can normally be reached on alt. Mondays and Tuesday to Friday(9am-6:30pm).

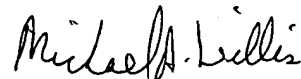
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Travers (acting SPE) can be reached on (703) 308-4603. The fax phone numbers for the organization where this application or proceeding is assigned



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are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1234.



Michael A. Willis  
Examiner  
Art Unit 1617

maw  
September 5, 2002



RUSSELL TRAVERS  
PRIMARY EXAMINER  
GROUP 1200